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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,277	04/01/2004	Mitchell T. Johnson	59656US002	8373
32692 7590 05/01/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER THOMAS, JAISON P	
			ART UNIT	PAPER NUMBER
			1751	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	05/01/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary

Application No.

10/815,277

Applicant(s)

JOHNSON ET AL.

Examiner

Jaison P. Thomas

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 25-36 is/are pending in the application.
- 4a) Of the above claim(s) 27-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. This action is responsive to an after final amendment filed 4/4/2007.
2. Claims 1-22 and 25-36 are pending. Claim 1 is amended. Claims 27-36 are withdrawn.
3. The rejections of Claims 1-3,5,6,8-10,13 and 14 under 35 USC 102(b) as being anticipated by Cekada et al. (US Patent 3445415 and US Patent 3433780 incorporated by reference) are withdrawn in view of applicant's amendments.
4. The rejections of Claims 4,7,21 and 22 under 35 USC 103(a) as being unpatentable over Cekada. (US Patent 3445415 and US Patent 3433780 incorporated by reference) are withdrawn in view of applicant's amendments.
5. The rejections of Claims of 1-26 under 35 USC 103(a) as being unpatentable over Chang et al. (US Patent 6736857) in view of Rees (US Patent 5284597) is withdrawn in view of the submission of a statement of common ownership.
6. The rejections of Claims of 1-26 under 35 USC 103(a) as being unpatentable over Chang et al. (US Patent 6802870) in view of Rees (US Patent 5284597) is withdrawn in view of the submission of a statement of common ownership.

Response to Amendment

7. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1,3,4,8,9,13,16-18,21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams et al. (US Patent 2004/0063600A1).

Williams teaches a manual spray cleaner which contains a fabric/carpet cleaning formula for removing soils and stains from carpets and fabrics. The cleaning formula is maintained at a pH of 7.5 to 12.0 contains an anti-soil component which contains silsesquioxane (pg. 5, para. 0056). In addition, the cleaning solution can contain non-ionic and anionic surfactants (pg. 6, paras. 0058 and 0064 respectively), pH adjusting agents used to remove trace amounts of iron including EDTA (pg. 6, para. 0062), peroxygen compounds such as cosmetic grade hydrogen peroxide, percarboxylic, perborate or percarbonate salts (pg. 6, para. 0068), and other anti-soiling components such as acrylic polymers (pg. 6, para. 0066). Further, other antistaining compositions disclosed in other patents are incorporated by reference (pg. 8, para. 0114). One patent incorporated by reference includes Micciche et al. (US Patent 6043209) which teaches a cleaning composition containing a polymeric or copolymeric soil resist. The polymers are derived from monomers of acrylic acid, methacrylic acid, methacrylate,

Art Unit: 1751

methyl methacrylate, ethyl acrylate and maleic acid ('209 patent, Col. 3, lines 50-69).

The amount of anti-soiling compound (i.e. silsesquioxane) can be present from 1 to 5 wt % of the cleaning solution (pg. 6, para. 0069). Surfactants include "ethylene oxides attached to lineal alcohol" and "alcohol ethers" (pg. 6, para. 0058). The non-ionic surfactant can be present at 0.8 or 1.8 wt % depending on surfactant selected (pg. 6, para. 0058). Anionic surfactant can be present at anywhere from 1.0 to 6.0 wt % (pg. 6, para. 0064). Peroxygen compound can be present from 0.1 to 10 wt % of the total composition (pg. para. 0068).

The reference is anticipatory.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US Patent Publication 2003/0060395).

" In one aspect, this invention relates to an aqueous composition having a pH of at least 6 that includes a stainblocking polymer, silsesquioxane anti-soiling polymer, surfactant, and optional sequestering agent, or salt." (pg. 1, para. 0007) "The silsesquioxane materials can be any of the types described in U.S. Pat. Nos. 4,781,844 (Kortmann, et al), 4,351,736 (Steinberger et al.), 5,073, 442 (Knowlton et al.) or

Art Unit: 1751

3,493,424 (Mohrlök et al.) each of which are incorporated herein by reference. These silsesquioxane polymers are of the formula $R-SiO_{3/2}$ or $R-Si(OR')_3$ alone or together with silanes of the formula $Si(OR')_4$ and/or $R_2-Si(OR')_2$ wherein R represents a substituted or unsubstituted hydrocarbon radical having 1 to 7 carbon atoms, substituents of which may be halogen atoms and mercapto and epoxy groups. R' represents an alkyl radical with 1 to 4 carbon atoms. Preferred silsesquioxane polymers are those that are neutral or anionic." (pgs. 7-8, paras. 0074-0075). "A second class of stainblocking polymers useful in the invention are polymers of at least one or more (α - and/or β -substituted) acrylic acid monomers, these materials sometimes being referred to herein as (α - and/or β -substituted) acrylic acid polymers." (pg. 5, para. 0047). "Included within the class of (α - and/or β -substituted) acrylic acid polymers are acrylic polymers; i.e., polyacrylic acid, copolymers of acrylic acid and one or more other monomers that are copolymerizable with acrylic acid, and blends of polyacrylic acid and one or more acrylic acid copolymers. These can be produced using well-known techniques for polymerizing ethylenically unsaturated monomers. Also included within the class of (α - and/or β -substituted) acrylic acid polymers, and most preferred, are methacrylic polymers; i.e., polymethacrylic acid, copolymers of methacrylic acid and one or more other monomers that are copolymerizable with methacrylic acid, and blends of polymethacrylic acid and one or more methacrylic acid copolymers." (pg. 5, para. 0054). "Monomers useful for copolymerization with either the acrylic acid or the methacrylic acid have ethylenic unsaturation." (pg. 5, para. 0055). "Particularly useful monomers

Art Unit: 1751

include ethyl acrylate, butyl acrylate, itaconic acid, styrene, sodium sulfostyrene, and sulfated castor oil, either alone or in combination." (pg. 5, para. 0055). "The hydrocarbon surfactants useful in this invention can be anionic, nonionic, cationic, or amphoteric, and compatible mixtures thereof." (pg. 8, para. 0078). The claims show examples wherein the stainblocker is present from 1 to 4 percent. (pgs. 15-17, Claims)

" The nonionic surfactants of the present invention include those having a hydrophobic/lipophilic balance (HLB) value (also called HLB number) of at least 18." (pg. 9, para. 0087). "Examples of suitable anionic surfactants include sodium xylene sulfonate, sodium lauryl sulfate, sodium myristyl sulfate, sodium lauryl ether (2) sulfate (i.e., C.sub.12H.sub.25(OCH.sub.2CH.sub.2).sub.2OSO.sub- .3.sup.-Na.sup.+), sodium decyl sulfate, ammonium myristyl ether sulfate, sodium nonylphenol polyglycol ether (15) sulfate, sodium C.sub.16-C.sub.18 .alpha.-olefin sulfonate, sodium dodecylbenzenesulfonate, sodium naphthyl sulfonate, sodium dihexyl sulfosuccinate, sodium laurate, sodium stearate, sodium ether (5) stearate, potassium ricinoleate (potassium 12-hydroxy-9-octadecanoate), sodium myristoyl sarcosine and sodium N-methyl-N-oleyl taurate. The preferred surfactant is sodium xylene sulfonate." (pgs. 8-9, para. 0085). " A free radical polymerization initiator is added to initiate polymerization of the (.alpha.- and/or .beta.-substituted) acrylic acid monomer in the presence of the sulfonated aromatic polymer. Useful initiators include persulfates (e.g., potassium persulfate, ammonium persulfate, or sodium persulfate), peroxides (e.g., sodium peroxide, hydrogen peroxide, benzoyl peroxide, acetyl peroxide, lauryl peroxide, cumyl peroxide, t-butyl peroxide, or t-butyl hydroperoxide), azo compounds (e.g., azo-bis-

Art Unit: 1751

isobutyronitrile), and hydrochloride salts of azo compounds." (pg. 7, para. 0071). "The composition may optionally contain a sequestering agent to chelate hardness ions such as calcium, magnesium, iron, manganese and the like that might be present in an aqueous use dilution water and detract from the cleaning performance of the composition. The sequestering agent can be organic or inorganic. Organic sequestering agents include a broad range of materials that can complex hardness ions. These include EDTA and its salts, citric acid and its salts, boric acid and its salts, nitrilotriacetic acid and its salts, polyelectrolytes such as polyacrylic acid and its copolymers, polymaleic acid and its copolymers, and so on. Inorganic sequestering agents include condensed phosphates, particularly those of the formula $M-(PO_3M)_nOM$ wherein M is an alkali metal, n is a number ranging from 1 to 60, typically less than 3 for non-cyclic phosphates. Examples of such phosphates include alkali metal orthophosphates such as sodium or potassium orthophosphate and alkali metal condensed phosphates (i.e., polyphosphates) such as sodium or potassium pyrophosphate, sodium tripolyphosphate, sodium hexametaphosphate and the like. A preferred sequestering agent is sodium tripolyphosphate, due to its sequestration and soil suspension properties." (pg. 9, para. 0089).

Chang is relied upon as disclosed above. However, Chang does not teach the percentages of peroxy compound as required by Claim 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the percentage of peroxy compound of Chang et al. through routine experimentation for best results. As to optimization results, a patent will

Art Unit: 1751

not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US Patent 2004/0063600A1).

Williams is relied upon as disclosed above. However, Williams does not teach a composition wherein the pH of the composition is 4 to 7.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a composition possessing the pH values of instant Claim 2. A prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, see *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See also MPEP 2144.051.

13. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US Patent 2004/0063600A1) in view of Chang (US 2003/0060395).

Williams is relied upon as disclosed above. However, Williams does not teach silsequioxane polymers comprised by silanes disclosed in Claims 5-7.

Art Unit: 1751

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the silsesquioxane of Williams with silsesquioxanes comprised of the particular silanes of Chang since substitution of art recognized equivalents is within the level of the ordinary skill in the art and both the Chang and Williams patents are directed to the analogous art of carpet cleaning compositions.

14. Claims 10-12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US Patent 2004/0063600A1) in view of Chang (US 2003/0060395).

Williams is relied upon as discussed above. However, Williams does not teach the anionic and nonionic surfactants as required by the instant claims.

Chang is relied upon as disclosed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the anionic and nonionic surfactants of Chang in the cleaning composition of Williams since it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, see *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

15. Claims 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US Patent 2004/0063600A1) in view of Chang et al. (US Patent Publication 2003/0060395).

Art Unit: 1751

Williams is relied upon as disclosed above. However, Williams does not teach a stainblocking polymer which is comprised of a copolymer of methacrylic acid and butyl acrylate as required by Claim 19, the required silanes comprising the silsesquioxane as required by Claim 20.

Chang is relied upon as disclosed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the stainblocking polymers, surfactants and silsesquioxanes of Williams with the stainblocking polymers, surfactants and silsesquioxanes of Chang since substitution of art recognized equivalents is within the level of ordinary skill in the art and both the Chang and Williams patents are directed to the analogous art of carpet cleaning compositions.

16. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US Patent 2004/0063600A1) in view of Chang et al. (US Patent Publication 2003/0060395).

Williams is relied upon as discussed above. However, Williams does not teach certain sequestering agents from Claim 1 including sodium tripolyphosphate as required by Claim 25.

Chang is relied upon as disclosed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the EDTA of Williams with the sequestering agents of

Art Unit: 1751

Chang since substitution of art recognized equivalents is within the level of the ordinary skill in the art.

17. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US Patent 2004/0063600A1).

Williams is relied upon as disclosed above. However, Williams does not teach the percentage of stainblocker as required by claim 26.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the percentage of stainblocker (acrylic polymer) of Williams through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

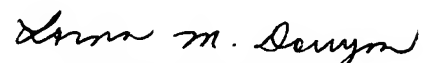
Art Unit: 1751

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Thomas
Examiner
4/18/2007

JT


LORNA M. DOUYON
PRIMARY EXAMINER